CLAIMS

1. A transport vehicle comprising a pair of swing suppression units configured to contact a transported object from front and rear in a traveling direction, the transport vehicle comprising:

a moving mechanism configured to move at least one of the swing suppression units in the traveling direction between a first position contacting the transported object and a second position spaced away from the transported object by a drive of a drive unit; and

a buffer mechanism configured to allow the swing suppression unit that has been moved to the first position by the drive of the drive unit to move to the traveling direction after stopping the drive of the drive unit; wherein

the buffer mechanism includes:

an operation portion coupled to the swing suppression unit and configured to perform a movement of an operation amount in accordance with an amount of movement of the swing suppression unit in a direction toward the second position;

a first bias portion configured to bias the operation portion so that the swing suppression unit presses the transported object; and

a second bias portion configured to act on the operation portion when the operation amount of the operation portion is greater than a predetermined amount and to bias the operation portion so that the swing suppression unit presses the transported object, wherein

the moving mechanism includes:

a supporting portion rotatable bidirectionally around a rotation shaft and configured to support the swing suppression unit;

a drive shaft configured to rotate by a drive of the drive unit;

a crank portion configured to rotate bidirectionally by rotation of the drive shaft; and

a connecting portion coupled at one end to a position that is eccentric to the drive shaft of the crank portion so as to be rotatable bidirectionally and coupled at the other end to a position that is eccentric to the rotation shaft of the supporting portion so as to be rotatable bidirectionally.

2. The transport vehicle according to claim 1, wherein the drive shaft, a coupling position between the crank portion and the connecting portion, and a coupling portion between the connecting portion and the supporting portion are located on one straight line in an extending direction of the connecting portion when the swing suppression unit is located at the first position.

3. The transport vehicle according to claim 1 or 2, wherein

the buffer mechanism is provided in the connecting portion;

the operation portion includes a first coupling portion coupled to the supporting portion and a rod-shaped portion coupled at a first end to the first coupling portion;

the buffer mechanism further includes a second coupling portion including a first body portion coupled to the crank portion and a second body portion that has an insertion hole through which the rod- shaped portion is inserted, and that is spaced at an interval from the first body

portion;

the first bias portion is arranged so as to contact the first coupling portion and the second body portion;

the second bias portion is arranged in the first body portion or fixed to a second end of the rod-shaped portion, and

the rod-shaped portion and the first body portion come into contact with each other via the second bias portion when an operation amount of the operation portion exceeds a predetermined amount.

4. The transport vehicle according to any one of claims 1 to 3, wherein

the moving mechanism includes a first link portion fixed to the drive shaft, a second link portion rotatable bidirectionally around the rotation shaft, and a third link portion coupled to both of the first link portion and the second link portion so as to be rotatable bidirectionally;

the third link portion is movable between an advanced position below the transported object and a retracted position arranged at a position retracted from below the transported object;

movement of the third link portion to the advanced position interlocks with movement of the swing suppression unit to the first position; and

movement of the third link portion to the retracted position interlocks with movement of the swing suppression unit to the second position.

5. The transport vehicle according to any one of claims 1 to 4, wherein, an elastic modulus of the second bias portion is greater than an elastic modulus of the first bias portion.

6. The transport vehicle according to any one of claims 1 to 5, wherein, the second bias portion has viscoelasticity.

7. The transport vehicle according to any one of claims 1 to 6, wherein, the first bias portion is a spring member and the second bias portion is a rubber body.